

**Remarks/Arguments**

Reconsideration of the above-identified application in view of the present amendment is respectfully requested.

Claims 8, 12, 18 and 21 have been rejected under 35 USC §112 as being indefinite.

Claims 18 and 21 have been amended to depend from claim 13. It is respectfully submitted that claims 18 and 21 are no longer rejectable under 35 USC §112.

Additionally, due to the above-mentioned amendments, it is respectfully submitted that claims 8 and 12 are also no longer rejectable under 35 USC §112.

Claims 1-4, 10-15 and 20-22 have been rejected under 35 USC §102(b) as being anticipated by US 6,340,356 to Navia et al. ("Navia"). This rejection is respectfully traversed.

Navia does not disclose a proximal end portion being configured to connect to an artery outside of the pericardium to automatically supply oxygenated blood from the artery for retroperfusion of a coronary vein, as recited in amended claim 1. As best shown in Fig. 1 of Navia, intraluminal catheter 10 has an adapter 14 mounted on the proximal end of the shaft 11 (See also, Navia, Col. 4, lines 41-46). However, nothing in Navia discloses that adapter 14 is configured to connect to an artery outside the pericardium. In fact, Navia does not explicitly disclose any use for adapter 14. Thus, Navia does not disclose each and every element of amended claim 1. Accordingly, amended claim 1 is not anticipated by Navia, and allowance of amended claim 1 is respectfully requested.

It is respectfully submitted that claims 2-4 and 10-12, which depend directly or indirectly from amended claim 1, are not anticipated by the cited prior art by virtue of their dependence from amended claim 1 and by the specific limitations recited therein. Accordingly, allowance of claim 2-4 and 10-12 is respectfully requested.

Additionally, regarding claim 4, Navia does not disclose a membrane that includes at least one opening to allow limited blood flow across said membrane, as recited in claim 4. As best seen in Fig. 7 of Navia, occluding member 13 does not have an opening. Thus, the occluding member 13 disclosed in Navia does not allow limited blood to flow across the occluding member. Accordingly, Navia does not disclose each and every element of claim 4.

Regarding claim 13, Navia does not disclose a proximal end portion being configured to connect to an artery outside of the pericardium to automatically supply oxygenated blood from the artery for retroperfusion of a coronary vein, as recited in amended claim 13. As best shown in Fig. 1 of Navia, intraluminal catheter 10 has an adapter 14 mounted on the proximal end of the shaft 11 (See also, Navia, Col. 4, lines 41-46). However, nothing in Navia discloses that adapter 14 is configured to connect to an artery outside the pericardium. In fact, Navia does not explicitly disclose any use for adapter 14. Thus, Navia does not disclose each and every element of amended claim 13. Accordingly, amended claim 13 is not anticipated by Navia, and allowance of amended claim 13 is respectfully requested.

It is respectfully submitted that claims 14-15, 20 and amended claim 21, which depend directly or indirectly from amended claim 13, are not anticipated by the cited prior art by virtue of their dependence from amended claim 13 and by the

specific limitations recited therein. Accordingly, allowance of claim 14-15, 20 and amended claim 21 is respectfully requested.

Additionally, claim 15 recites a membrane that includes at least one opening to allow limited blood flow across the membrane. As stated above with respect to claim 4, the occluding member 13 disclosed in Navia does not have an opening. Accordingly, Navia does not disclose each and every element of claim 15. Therefore, Navia does not anticipate claim 15, and claim 15 should be allowed.

In regards to claim 22, Navia does not disclose fluidly connecting the proximal end portion of the cannula to an artery to automatically supply oxygenated blood for retroperfusion, wherein occluding means at least partially occludes a coronary vein to decrease the back-flow of blood into the right atrium during retroperfusion, as recited in claim 22. Navia does not disclose that the proximal end of intraluminal catheter 10 is fluidly connected to an artery. Navia does not explicitly disclose connecting the proximal end of catheter 10 to anything. In fact, Navia does not disclose fluidly connecting an artery to a vein at all. That is, Navia is silent on automatically supplying oxygenated blood for retroperfusion. Accordingly, Navia does not disclose each and every element of claim 22. Therefore, Navia does not anticipate claim 22, and allowance of claim 22 is respectfully requested.

Claims 5 and 16 have been rejected under 35 USC §103(a) as being unpatentable over Navia, in view of US 5,938,582 to Ciamacco, Jr. ("Ciamacco"). This rejection is respectfully traversed.

Applicants agree that Navia does not teach or suggest an occluding balloon with a plurality of lobes defining radial gaps between the lobes, as recited in claims 5 and 16.

Regarding claim 5, the combination of Navia and Ciamacco fails to teach or suggest the elements amended claim 1, from which claim 5 depends. The combination of Navia and Ciamacco fails to teach or suggest a proximal end portion being configured to connect to an artery outside the pericardium to automatically supply oxygenated blood from the artery for retroperfusion of the coronary vein, as recited in amended claim 1. Since neither reference alone or in combination teaches or suggests the element of claim 5, claim 5 is patentable over Navia in view of Ciamacco. Accordingly, allowance of claim 5 is respectfully requested.

Regarding claim 16, the combination of Navia and Ciamacco fails to teach or suggest the elements of amended claim 13, from which claim 16 depends. The combination of Navia and Ciamacco fails to teach or suggest a proximal end portion being configured to connect to an artery to automatically supply oxygenated blood from the artery for retroperfusion of the coronary vein, as recited in amended claim 13. Since neither reference teaches or suggests the elements of claim 16, claim 16 is patentable over Navia in view of Ciamacco. Accordingly, allowance of claim 16 is respectfully requested.

Claims 6-9, 17-19 and 23-26 have been rejected under 35 USC §103(a) as being unpatentable over Navia, in view of US 5,824,071 to Nelson, et al. ("Nelson"). This rejection is respectfully traversed.

Applicants agree that Navia does not teach or suggest that a proximal end a cannula has a graft or catheter attached thereto for suturing to an artery, as recited in claim 6. However, the addition of Nelson does not cure the deficiencies of Navia. As best seen in Fig. 11B of Nelson, tubular member 124 is driven into myocardium 73. However, tapered end of fitting 128 is driven into engagement with the interior wall of a coronary sinus (See Nelson, Col. 10, lines 63-65). Nothing in Nelson would teach or suggest that either tubular member 124 could or fitting 128 of Nelson could be attached to the end of an intraluminal cannula, as suggested by the Office Action. Additionally, as stated above with respect to amended claim 1, Navia does not explicitly state a use for adapter 14. Navia does not teach or suggest that adapter 14 could comprise a graft for suturing to an artery outside of the pericardium, as recited in claim 6. In fact, in Navia, cannula member 18 is designed for delivering or removing fluids from a body lumen (See Navia, Col. 6, lines 32-33). Navia does not disclose or suggest that cannula member 18 can be employed for automatically supplying oxygenated blood for retroperfusion of a coronary vein, as recited in claim 6. Accordingly, it is respectfully submitted that there is no motivation to modify Navia in view of Nelson in a manner as suggested by the Office Action. It would appear that the present application is improperly providing the missing motivation to combine and modify Navia and Nelson. The Federal Circuit has held that the motivation to combine references cannot come from the invention itself.

ACS Hospital Systems, Inc. v Montefiore Hospital 732 F.2d 1572, 1578

(Fed. Cir. 1984). Accordingly, it is respectfully submitted that the combination and modifications of Navia and Nelson as suggested by the Office Action would not have

been obvious to one of ordinary skill in the art. Therefore, claim 6 should be patentable over Navia in view of Nelson, and, allowance of claim 6 is respectfully requested.

It is respectfully submitted that claim 7 which depends from claim 6, is not rendered obvious by the cited prior art by virtue of its dependence from claim 6 and by the specific limitations recited therein. Accordingly, allowance of claim 7 is respectfully requested.

Claim 8 is similar to claim 6 and should be patentable over the cited prior art for at least the same reasons as claim 6. Accordingly, allowance of claim 8 is respectfully requested.

It is respectfully submitted that claim 9 which depends from claim 8, is not rendered obvious by the cited prior art by virtue of its dependence from claim 8 and by the specific limitations recited therein. Accordingly, allowance of claim 9 is respectfully requested.

Claim 17 is similar to claim 6 and should be patentable over the cited prior art for at least the same reasons as claim 6. Accordingly, allowance of claim 17 is respectfully requested.

It is respectfully submitted that amended claim 18 and claim 19 which depend from amended claim 13 are not rendered obvious by the cited prior art by virtue of their dependence from amended claim 13 and by the specific limitations recited therein. Accordingly allowance of amended claim 18 and claim 19 is respectfully requested.

The method recited in claim 23 is similar to claim 6, and should be patentable over the cited prior art for at least the same reasons as claim 6. Accordingly, allowance of claim 23 is respectfully requested.

It is respectfully submitted that claim 24 which depends from claim 23, is not rendered obvious by the cited prior art by virtue of its dependence from claim 23 and by the specific limitations recited therein. Accordingly, allowance of claim 9 is respectfully requested.

The method recited in claim 25 is similar to claim 6, and should be patentable over the cited prior art for at least the same reasons as claim 6. Accordingly, allowance of claim 25 is respectfully requested.

It is respectfully submitted that claim 26 which depends from claim 25, is not rendered obvious by the cited prior art by virtue of its dependence from claim 25 and by the specific limitations recited therein. Accordingly, allowance of claim 26 is respectfully requested.

In view of the foregoing, it is respectfully submitted that the above-identified application is in condition for allowance, and allowance of the above-identified application is respectfully requested.

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'R. Wesorick', written over a horizontal line.

Richard S. Wesorick  
Reg. No. 40,871

TAROLLI, SUNDHEIM, COVELL,  
& TUMMINO L.L.P.  
526 Superior Avenue, Suite 1111  
Cleveland, Ohio 44114-1400  
Phone: (216) 621-2234  
Fax: (216) 621-4072  
Customer No.: 26,294